### How to prepare files for printing?

SPECIFICATION

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We will dress your business

# We will dress your business

printON.it is a website created for companies that makes it possible to print on various types of textiles. In a few simple steps, you can select the product you are interested in (for example, a T-shirt, polo shirt, sweatshirt, bag or cap) and the type of printing.

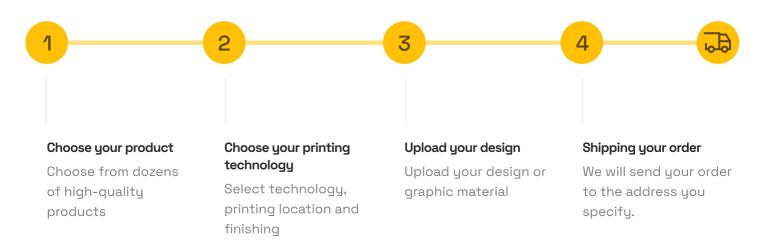
### Order process

We want our customers to be able to complete their garment printing orders faster and more efficiently through our website. The path to ordering is simple.





#### The path to the order is simple 👇





### **Files**

In order to complete your order, you will need to upload the files containing the graphic materials for your specific design or logo.



With the help of our Wizard you can then create a visualisation, i.e. you can place your graphic design or logo on the selected product. You will then receive the visualised design for approval. This will be followed by its production.

The design module of the Wizard is not available for all printing technologies. In this case, once you have uploaded your files, our Graphics Department will prepare a visualisation and send it to you for approval. **IMPORTANT!** The files that will be added during the product configuration process must be saved in the right quality and format. Their quality is extremely important so that the final result, printing on the chosen product, is the best it can be. Below are the technical specifications. You should read them before you start the ordering process. Please note that the maximum file size for uploading is 2 MB.



How do I order from feelgood? - you will find a description here (link)



# Technical specification

and description of marking methods (printing technologies) – guidelines for source files with graphics or logos

### General guidelines



### Fonts

All text (fonts) should be converted to curves (for vector files) or embedded (for bitmap files) to avoid problems with unavailable fonts.

### Colours

Ensure that the colours match the intended print effect, using a colour profile appropriate to the technology. Remember that computer screens distort colours.





### **Files**

If your files contain photos or graphics, make sure they are of suitable quality and suitable for the print size and that bitmaps are embedded in the file.

### File types adapted to the marking methods (printing technologies)

### Screen printing | hand screen printing | screen printing with colour separation

- File format: Usually, the preferred format is vector, e.g. AI (Adobe Illustrator), EPS or SVG. Alternatively, high-resolution bitmap files such as TIFF, PNG or PSD (Adobe Photoshop) are acceptable.
- **Resolution:** For bitmap files, the minimum resolution is 300 dpi (dots per inch).
- **Colours:** Vector files should be prepared in CMYK colour mode. Pantone colours from the SOLID COATED or SOLID UNCOATED palette are preferred. The colour scheme for separation patterns (with tonal transitions) should be prepared in RGB, to which Pantone is then matched.
- Layers: In multi-layer files (e.g. PSD), each layer should be named and described accordingly. This will help the graphic designers to navigate between them. It is IMPORTANT that the PSD files contain the design to be printed, without any unnecessary background (e.g. white or black).
- Working area: The recommended working area is the actual print size.

#### Embroidery

- File format: Usually a vector format is preferred, such as AI, EPS or SVG.
- **Resolution:** When it comes to computer embroidery, resolution is not important as the process involves generating stitches based on a vector.
- **Colours:** Files should be prepared in CMYK colour mode or assigned from the Pantone colour palette. From this, the embroiderer selects the nearest thread colour. The thread colour number can also be selected from the MADEIRA Polyneon 40 palette.
- Working area: Define the work area according to the planned embroidery area.

#### Sublimation

- File format: You can use vector (AI, EPS, SVG) or bitmap (JPEG, PNG) formats, depending on your specific sublimation application
- **Resolution:** For bitmap files, the minimum resolution is 300 dpi.
- Colours: Files should be prepared in CMYK colour mode
- Working area: According to the planned sublimation area

#### **DTG/DTF** digital printing

- File format: TIFF, JPEG, PNG or PSD (layered Photoshop file)
- Resolution: Minimum resolution: 300 dpi (dots per inch)
- Colours: Files should be prepared in CMYK colour mode
- Working area: According to the planned embellishment area



# **Embellishment** methods

and technological requirements worth noting



## Screen printing

Screen printing – is one of the most durable types of printing, which is used for printing on various types of textiles (for example, T-shirts, polo shirts, sweatshirts, cotton bags).



# What is worth knowing about screen printing?

The printing process is carried out by applying a small mesh to the printed form, which appears in the form of a stencil.

Screen printing is a printing technology in which the printing form consists of a stencil applied to a fine woven, metal or synthetic fibre mesh. Printing, on the other hand, involves forcing ink through the screen, ensuring full reproduction of the image from the source file. The process involves passing the ink through a silkscreen matrix on which a pattern has previously been created. The matrix consists of a fine mesh on which opaque areas block the flow of ink. The ink penetrates into the fabric through the transparent areas.

Screen printing is a permanent marking method. However, it is important to remember to follow the washing rules for printed garments. The print should then last for around 100–150 washes. Screen printing is an ideal method for both polyester and cotton fabrics.

#### Screen printing features



#### **Textiles**

it is possible on a variety of textile products (for example T-shirts, polo shirts, sweatshirts, cotton bags)



#### **Colour separation**

allows a full range of colours to be printed using colour separation



#### Number of colours

up to a maximum of 10 colours can be printed



Quality provides excellent print

quality

feelgood.

### Screen printing – technological requirements

#### Pantone colour

In order to obtain a colour similar to pantone, the line printed on the substrate should be at least **1pt thick, i.e. 0.35 mm** 

#### Thickness of the pick

The thickness of the blank area, the gap, is **1.5–2** pt, i.e. 0.5–0.7 mm

#### **Difficult substrates**

In the case of more difficult substrates, e.g. jute bags, where the fibre weave is much thinner and the fibres are thicker, we print a line with a minimum thickness of about **1 mm.** 

#### Design mapping

It is very difficult to reproduce a design in the same high detail and quality as when printing on paper, because in screen printing, the ruling – i.e. the number of lines per inch – is **68 LPI**, while in offset printing it is between **120 and 180**, i.e. there is almost **3 times** more detail in offset than in screen printing.

#### Water-based ink

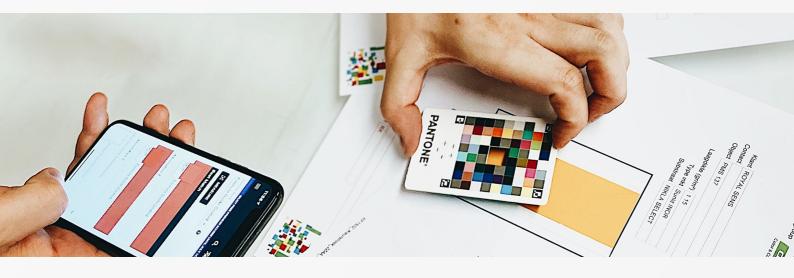
In water-based ink printing, the ruling is **55 LPI**, so the reproduction quality is even lower than in plastisol inks.

#### **Metallic inks**

In the case of printing with metallic inks – silver, gold – low screens are used, i.e. with fewer meshes, but the 'holes' through which the ink passes are larger, allowing the metallic filings to pass through – these filings would not pass through on standard meshes but would remain on the screen, and only the base would pass through. The metallic effect would not be possible.

#### Pantone Solid Coated & Uncoated

We print from the Pantone **Solid Coated – C** and Pantone **Solid Uncoated** – U palettes. In addition to this, there are also ready-to-use inks such as fluo – outside Pantone or standard black ink, and not mixed inks such as BLACK C or Black 1-7 C.



# Embroidery

Computer embroidery is the embroidering of designs using thread. It is one of the most elegant and qualitative methods of decorating garments.



# What is worth knowing about embroidery?

Clothing with embroidery is seen as a prestigious product – it is often used in the production of premium garments.

Embroidery is done by machine, which allows us to maintain greater precision of stitches and speed of embroidery. Making embroidery involves embroidering a pre-programmed design using a needle and thread. We use specialised machines for this, which are controlled via a computer.



Embroidery is a very efficient method of embellishing clothing, which is characterised by a three-dimensional, embossed pattern. It is a very popular method of labelling clothing and is used on polo shirts, sweatshirts, fleece jackets, waistcoats, baseball caps, shirts and much more.



Embroidery is a marking method that requires the use of embroidery software, which is prepared by our operators. This software controls the machine by showing it where the needle is to embroider a particular design.

The embroidery software records all the information the machine needs:

- number of stitches
- number of thread colours
- embroidery speed
- name of the design

# Embroidery – technological requirements

#### SATIN

We assume a line thickness of about **1mm** per stitch known as SATIN – i.e. the needle goes right/left along a line of this thickness (jumps).

#### Letter height

The basic criterion for us is the height of the letters – from 5mm the letters cannot be squeezed, e.g. in Narrow font, because the needle has no space to jump and make a bump in the letters b p e. The same applies to serif fonts, i.e. fonts with a decorative ending, such as the popular TIMES NEW ROMAN and others. In this case, the inscription must be suitably larger. The standard size of the embroidery field on our hats is 11x5 cm. The others are determined by the size of the embroidery hoop which can be fastened to the fabric.

#### ComplexFill

We also have other stitches, such as ComplexFill – used for filling applications – which generates a lot of stitches and therefore increases the price and time of embroidering. A single stitch is known as a lockstitch.

#### Threads

We use threads from MADEIRA from the POLYNEON number 40 palette. Polyneon is a polyester thread. The number 40 indicates the thickness of the thread – 40 is standard.

#### Embroidery software

The embroidery software shows the machine how the frame should work, as the needle is fixed in place. The embroidery machine frame moves with the embroidery hoops and textiles fastened to it. Plus cuts and nodes and the order of elements.



# Sublimation

This is a relatively simple and effective printing technique used to transfer graphics and images onto a variety of polymer surfaces.





# What is worth knowing about sublimation?

#### It works very well for a variety of promotional materials, such as sportswear.

Prints made using this technology are durable. The print will not easily crumbleor peel off, and textiles can be washed freely in a washing machine. Sublimation printing is odourless and environmentally friendly. The inks used for sublimation printing are water-based and not solvent-based as with, for example, the UV technology.

### What does sublimation printing involve?

We start by printing an illustration or text to be placed on the surface of the selected item on the transfer paper. At this stage, it is very important to properly prepare the source files that will form the image of the printed design. Attention must be paid to the resolution of the illustrations and graphic elements. Too intensive scaling of the image can result in a significant decrease in resolution.

Sublimation printing is also known as indirect printing. The print medium is transfer paper, which becomes an intermediary between the image, the graphic file and the item on which the print is to be placed. The printed paper is inserted into a device called a thermal transfer press, which presses it onto the substrate on which the graphic is to be printed, thus obtaining the print.

> The material on which the print is made plays a very important role in sublimation printing. The higher the polyester content, the better the print quality and colour saturation you will get.

The sublimation phenomenon, a direct transition from a solid to a gaseous state, without a liquid state, is at the heart of sublimation printing technology. The dye molecules on the transfer paper penetrate the structure of the printed substrate as a gas under the pressure of the press and the high temperature. The temperature fluctuates around 180–200 degrees Celsius and the press time is approximately 30–60 seconds on average.

An important element is the fine-tuning of the print colours. Sublimation technology uses translucent dyes, the final colour of which is influenced by the shade of the printed substrate. Therefore, sublimation printing works best with light fabrics – white. It is impossible to print light motifs on dark fabrics. If you want to achieve such an effect, it is necessary to print a light motif on the entire white substrate with a dark background.

#### Full or partial sublimation

Take a close look at the products on our website. At a glance, we do full sublimation printing on sewn products created from scratch to your order. We also do selective, partial sublimation printing on finished products.



# Sublimation – technological requirements

#### Sheet-fed sublimation printer

We print in CMYK, possible application sizes – width and height result from the size of the tops in the presses, e.g. a waisted women's shirt will not fit on the largest top – thus it is not possible to make an embellishment larger than a slightly smaller size of the top. We do not make an embellishment the size of the top exactly, as the press has mechanical shortcomings and often does not heat up in the same way on the extreme edges as it does in the middle of the pattern. **We usually subtract 1 to 2 cm.** 

#### Sublimation on a calender

this is a type of sublimation where patterns are printed on a roll of paper which is then placed on the machine. Sublimation from roll to roll using a circular cylinder heated to approximately **200 degrees.** 

#### Permitted width of decoration

Here, the permissible width of the embellishment is determined by the size of the medium (paper) we can put on. We use a **160cm** roll, with the optimum print width set at **158cm**. It is important to remember that we have most of the patterns with bleeds – allowing for slight tolerances in the material or overlapping of use, for example a tube scarf, by the operator. In the case of die-cuts – we can use **1:1 die-cut** to print patterns, but only because when sewing a T-shirt with an overlocker, a margin of approx. 0.7cm is taken from the edge to the seam. Optimal quality **1:1 pattern in 300 DPI** prepared in CMYK. No white or metallic colours are possible in sublimation.



# Digital DTG & DTF printing

Digital printing is ideal for preparing embellishments on garments in small quantities.



### What is worth knowing about DTG and DTF digital printing?

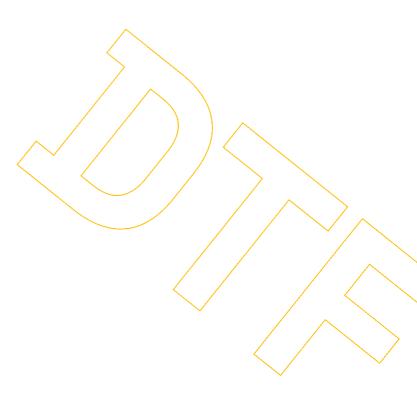
It allows the colour palette to be reproduced very well and works excellently for photo-based designs.

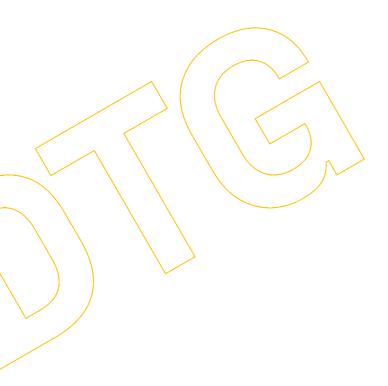
Digital printing should be carried out on materials that consist of at least 50% cotton.

#### DTG or Direct To Garment

DTG or Direct To Garment digital printing is a direct printing method, which is carried out using a printing machine that creates an image from data sent from a computer. This method of decoration is characterised by extreme precision and accurately reproduces even the smallest elements of the design.

It is ideal for full-colour, small-run work requiring fast production and flexibility.





#### DTF, or Direct to Film

DTF, or Direct to Film, is a very simple process, similar to thermal transfer. It is an indirect method in which the design is first printed on a special PET film, then the film is heated in a press and then transferred to the garment using an industrial press.

DTF marking has many advantages – the prints made using this method are very vivid and have saturated colours. They are ideal for multi-colour designs, graphics and photos.

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Ubierzemy Twój biznes

### Support

If you have any questions about file preparation, please contact us. You can do this by calling our helpline, using the chat or by email. You can also leave us a message asking us to call you back at a time that suits you. Our specialists will help you clear up any doubts.

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